



# TACCIMO

Template for Assessing Climate Change  
Impacts and Management Options

## USDA Forest Service – Threat Assessment Centers

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## USDA Forest Service – Southern Region

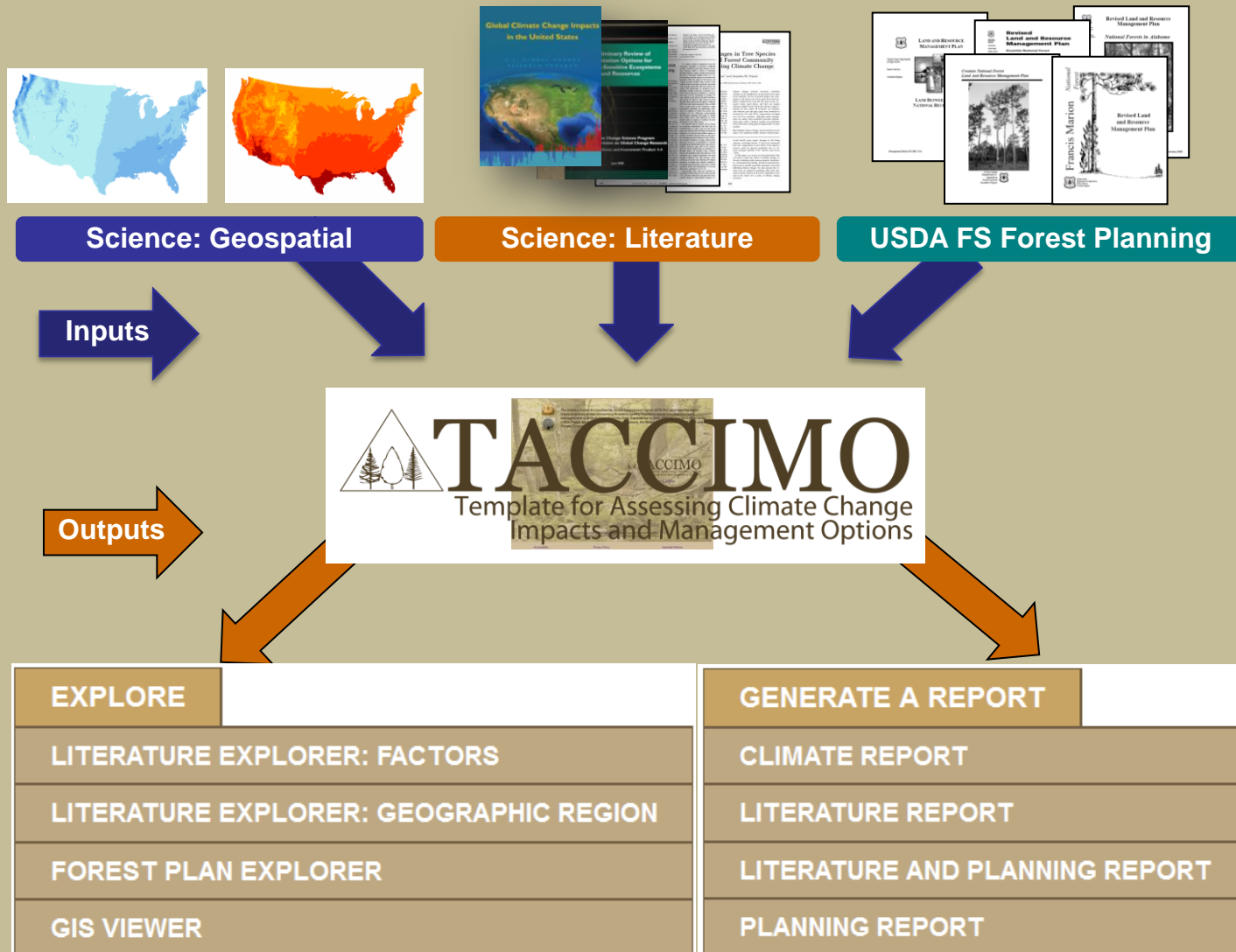
**Chris Liggett (PI)**

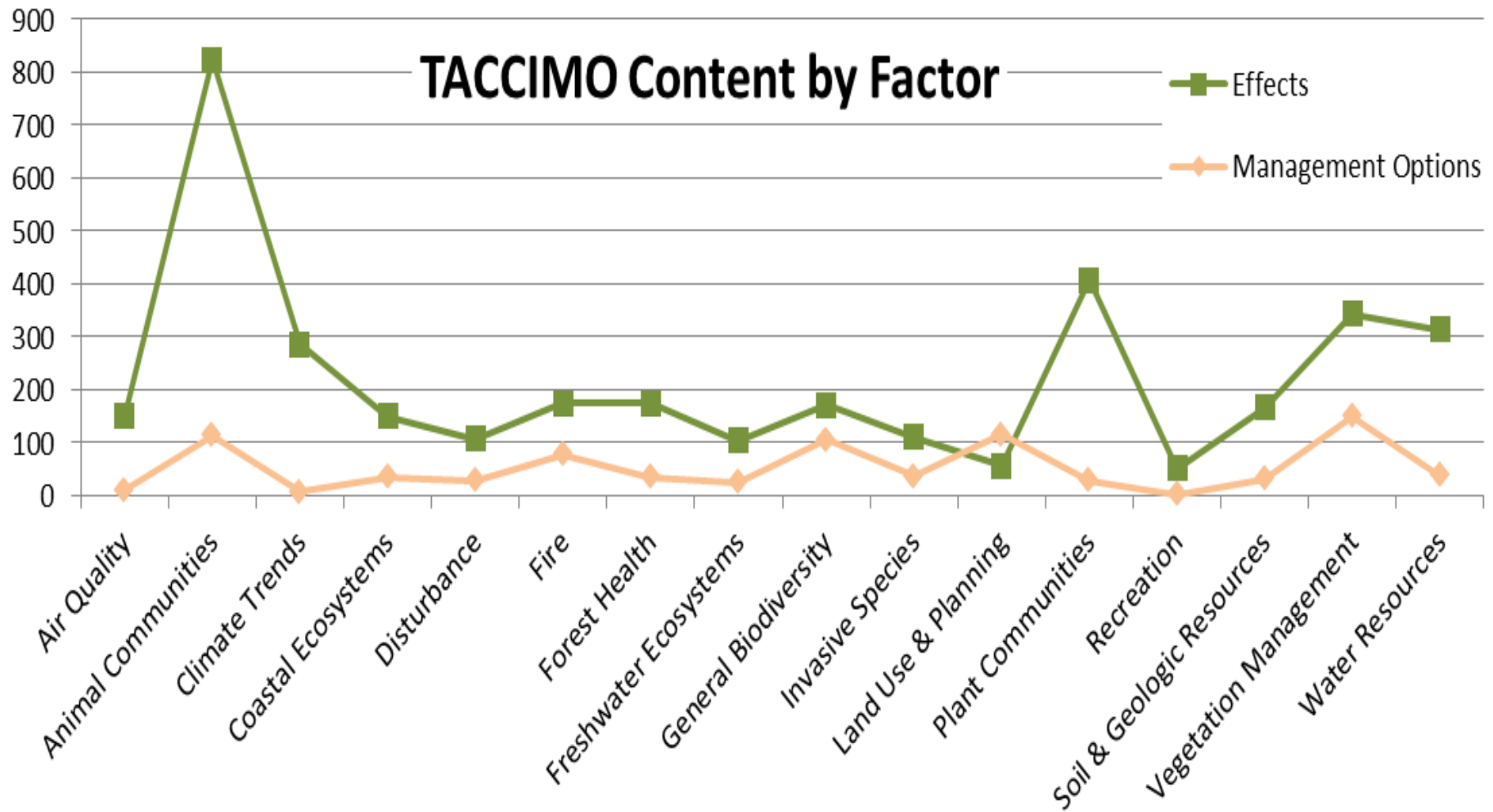
**David Meriwether**

**Paul Arndt**



# Inputs and Outputs







## TACCIMO Literature and Planning Report

Literature based science includes quotations derived from peer reviewed literature describing direct impacts of climate change and potential management options. Planning refers to categorized components derived from Forest Service land and resource management plans for the eastern United States (Region 8 and 9) and some areas in the western United States (Region 5). This report generator produces an exportable report from the science literature and forest plan content based on a series of user-defined selections. The purpose of the Generate A Report interface is to allow users to document and export content found in TACCIMO. The report interface parallels the explore interface and enables quick summarization of information to help guide additional analysis and expert consultation.

To get started, follow the step-by-step selections and click the Run Report button. **At any point in the Literature and Planning Report click the buttons on the top right for Help text, an instructional Video, a Feedback Form, and a general statement of purpose and limitations.**

Step 1: Select Factor:	Animal Communities; Biodiversity ▼	Step 2: Select Category:	Birds; Terrestrial Ecosystems: Vege ▼
Step 3: Select Region:	National; West; R5: Pacific Southwe ▼	Step 4: Select Resolution:	General; Moderately Specific; Specil ▼
Step 5: Select National Forest:	Giant Sequoia National Monument (2 ▼	<div>Run Report</div>	

◀ ▶ ⏪ ⏩ 0 of -- ▶ ▶ Export to the selected format ▼ Export 🔍 🖨️ 📧

Please

### Report Selections:

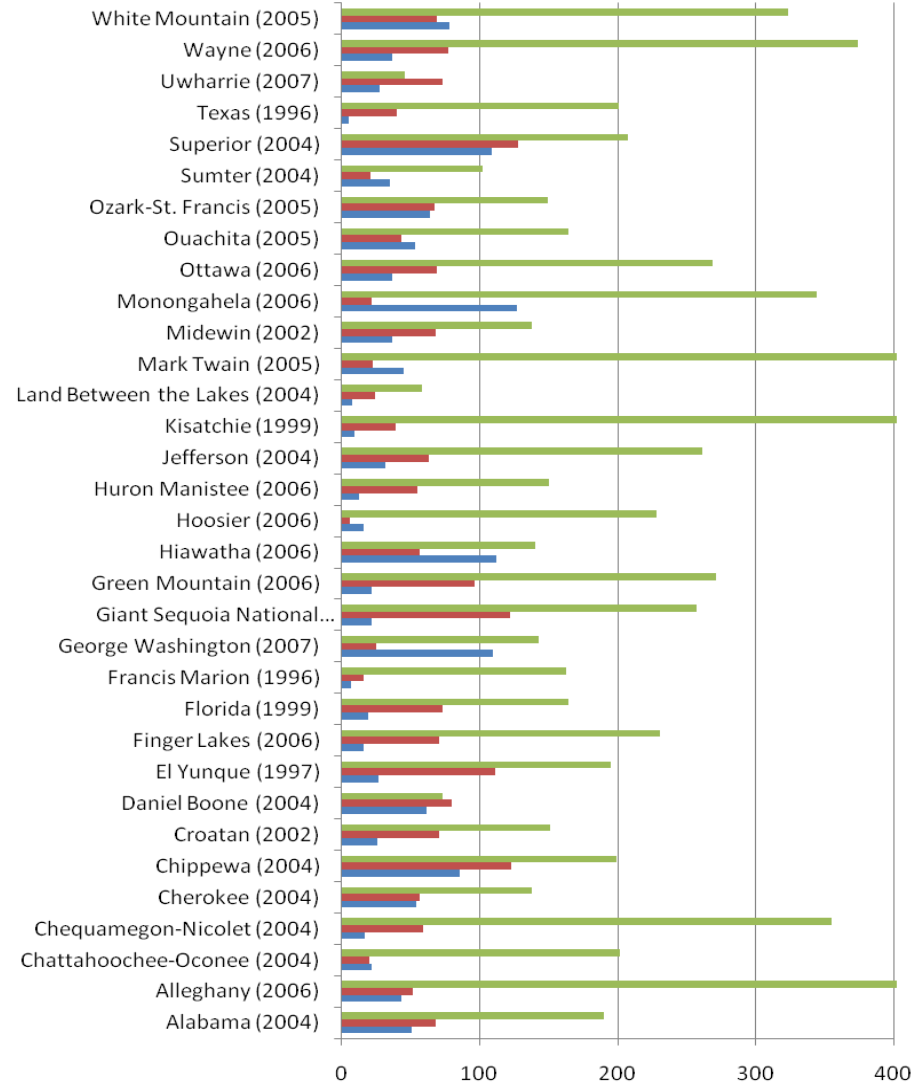
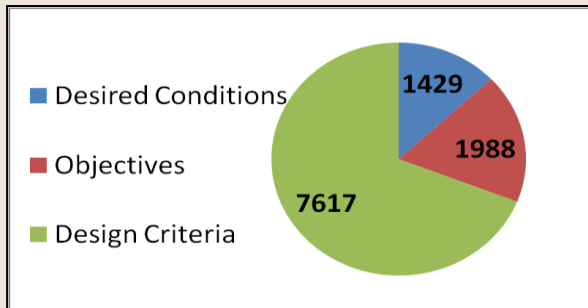
- (1) Factor
- (2) Category
- (3) Region
- (4) Resolution
- (5) National Forest Plan

Export as PDF, excel, or rich text (Word compatible)

# Planning

## USDA FS Forest Planning

- Sourced directly from **Forest Service land and resource management plans**
- Provides **quick access to a wealth of organized planning information**
- **Automatically linked to TACCIMO Factors through plan headings**





# TACCIMO Literature and Planning Report:



## TACCIMO Literature and Planning Report

Guidelines and other background information necessary for the responsible use of TACCIMO are fully documented in the User Guide. The section entitled Interpreting Results provides a detailed explanation of the purpose, strengths, limitations, and intended applications of the provided information. The section entitled Content Production System fully explains methods and criteria for the inclusion of content in TACCIMO. Fully understanding these dimensions of TACCIMO is essential to the proper application of its information. It is critical that users apply the results within a broader science assessment process that is part of a larger decision support framework. The exact form of this process will vary with the scale and nature of the planning or management activity in question, but the bottom line is that TACCIMO is an initial supplement to a more involved decision support process and not a substitute for it.

### Factors and Categories

Animal Communities  
 Birds  
 Biodiversity  
 Terrestrial Ecosystems:  
 Vegetation

### Geographic Regions

National  
 West  
 R5: Pacific Southwest

### Interacting Factors

Biodiversity  
 Animal Communities  
 Disturbance  
 Fire  
 Forest Health  
 Hydrology



# Scientific Literature Reporting



## TACCIMO Literature and Planning Report

### Animal Communities

Animal communities encompasses all faunal groups in a particular area and their relation to the surrounding environment. The effects of climate change on animal communities and populations will act through both direct effects on temperature requirements and indirect effects on habitat structure, resulting in shifting ranges and disrupted migrations. Specific effects will vary by taxa and species-specific life history traits. Management strategies to abate the effects of climate change focus on increasing landscape connectivity and maintaining high-quality habitats.

#### Birds

##### National

##### General

##### Effects

##### Source

For Western Hemisphere landbirds, intermediate extinction estimates based on climate-induced changes in actual distributions ranged from 1.3% (1.1 °C warming) to 30.0% (6.4 °C warming) of these species. Worldwide, every degree of warming projected a nonlinear increase in bird extinctions of about 100–500 species. Only 21% of the species predicted to become extinct in our scenarios are currently considered threatened with extinction.

383

Bird richness is predicted to be severely affected by climate change (Figure 6) because bird richness, more than that of any other group,

551



# Sources and Supporting Literature

## Sources

- 1 Joyce, L. A., Blate, G. M., Littell, J. S., McNulty, S. G., Millar, C. I., Moser, S. C., . . . Peterson, D. L. (2008). National forests. in: Preliminary review of adaptation options for climate-sensitive ecosystems and resources. a report by the U.S. climate change science program and the subcommittee on global change research. U.S.Environmental Protection Agency, 1-127.
- 3 Karl, T. R., Melillo, J. M., & Peterson, T. C. (2009). Global climate change impacts in the United States. New York, NY, USA: Cambridge University Press.
- 23 Iverson, L. R., & Prasad, A. M. (2001). Potential redistribution of tree species habitat under five climate change scenarios in the Eastern U.S. Forest Ecology and Management, 155, 205-222.

## Supporting Literature

### Animal Communities

### Source

American Ornithologists' Union (AOU). 1998. Check-list of North American birds. 8th edition. AOU, Washington, D.C. 1

Austin JE, Reichert AL (2001) A comprehensive review of observational and site evaluation data of migrant Whooping Cranes in the United States, 1943–99. U.S. Geological Survey, Northern Prairie Wildlife Research Center, Jamestown 483





# Website Location

[www.forestthreats.org/taccimotool](http://www.forestthreats.org/taccimotool)

or just google “TACCIMO”

For more information on TACCIMO  
contact Steve McNulty at

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# Thank You!

For more information on TACCIMO  
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